<110> Heston, Warren D.W.
O'Keefe, Denise S.

<120> DNA Encoding the Prostate-Specific Membrane Antigen-Like Gene and Uses Thereof

<130> D6230

<140> USSN 09/973,382
<141> 2001-10-09

<150> PCT/US00/09417
<151> 2000-04-09

<160> 38

<210> 1
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<210> 2
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<213> *Homo sapiens*

<220>
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Arg Ile Tyr Asn Val Ile Gly Thr Leu Arg Gly Ala Val Glu Pro
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Asp Arg Tyr Val Ile Leu Gly Gly His Arg Asp Ser Trp Val Phe
65 70 75
Gly Gly Ile Asp Pro Gln Ser Gly Ala Ala Val Val His Glu Thr
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Val Arg Ser Phe Gly Thr Leu Lys Lys Glu Gly Trp Arg Pro Arg
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Arg Thr Ile Leu Phe Ala Ser Trp Asp Ala Glu Glu Phe Gly Leu
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Leu Gly Ser Thr Glu Trp Ala Glu Asp Asn Ser Arg Leu Leu Gln
125 130 135

Glu Arg Gly Val Ala Tyr Ile Asn Ala Asp Ser Ser Ile Glu Gly
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Glu Gly Lys Ser Leu Tyr Glu Ser Trp Thr Lys Lys Ser Pro Ser
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Pro Glu Phe Ser Gly Met Pro Arg Ile Ser Lys Leu Gly Ser Gly
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Asn Asp Phe Glu Val Phe Phe Gln Arg Leu Gly Ile Ala Ser Gly
215 220 225
Arg Ala Arg Tyr Thr Lys Asn Trp Glu Thr Asn Lys Phe Ser Gly
230 235 240
Tyr Pro Leu Tyr His Ser Val Tyr Glu Thr Tyr Glu Leu Val Glu
245 250 255
Lys Phe Tyr Asp Pro Met Phe Lys Tyr His Leu Thr Val Ala Gln
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Val Arg Gly Gly Met Val Phe Glu Leu Ala Asn Ser Ile Val Leu
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Asp Lys Ile Tyr Asn Ile Ser Met Lys His Pro Gln Glu Met Lys
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Asp Lys Ser Asn Pro Ile Leu Leu Arg Met Met Asn Asp Gln Leu
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Met Phe Leu Glu Arg Ala Phe Ile Asp Pro Leu Gly Leu Pro Asp
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Arg Pro Phe Tyr Arg His Val Ile Tyr Ala Pro Ser Ser His Asn
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<220>
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<213> *Homo sapiens*

<220>
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Ser Asn Glu Ala Thr Asn Ile Thr Pro Lys His Asn Met Lys Ala
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Asn Phe Thr Gln Ile Pro His Leu Ala Gly Thr Glu Gln Asn Phe
80 85 90
Gln Leu Ala Lys Gln Ile Gln Ser Gln Trp Lys Glu Phe Gly Leu
95 100 105
Asp Ser Val Glu Leu Ala His Tyr Asp Val Leu Leu Ser Tyr Pro
110 115 120
Asn Lys Thr His Pro Asn Tyr Ile Ser Ile Ile Asn Glu Asp Gly
125 130 135
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140 145 150
Tyr Glu Asn Val Ser Asp Ile Val Pro Pro Phe Ser Ala Phe Ser
155 160 165
Pro Gln Gly Met Pro Glu Gly Asp Leu Val Tyr Val Asn Tyr Ala
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Arg Thr Glu Asp Phe Phe Lys Leu Glu Arg Asp Met Lys Ile Asn
185 190 195
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Gly Asn Lys Val Lys Asn Ala Gln Leu Ala Gly Ala Lys Gly Val
215 220 225
Ile Leu Tyr Ser Asp Pro Ala Asp Tyr Phe Ala Pro Gly Val Lys
230 235 240
Ser Tyr Pro Asp Gly Trp Asn Leu Pro Gly Gly Gly Val Gln Arg
245 250 255
Gly Asn Ile Leu Asn Leu Asn Gly Ala Gly Asp Pro Leu Thr Pro
260 265 270
Gly Tyr Pro Ala Asn Glu Tyr Ala Tyr Arg Arg Gly Ile Ala Glu
275 280 285
Ala Val Gly Leu Pro Ser Ile Pro Val His Pro Ile Gly Tyr Tyr
290 295 300
Asp Ala Gln Lys Leu Leu Glu Lys Met Gly Gly Ser Ala Pro Pro
305 310 315

Asp Ser Ser Trp Arg Gly Ser Leu Lys Val Pro Tyr Asn Val Gly
320 325 330
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335 340 345
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350 355 360
Thr Leu Arg Gly Ala Val Glu Pro Asp Arg Tyr Val Ile Leu Gly
365 370 375
Gly His Arg Asp Ser Trp Val Phe Gly Gly Ile Asp Pro Gln Ser
380 385 390
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395 400 405
Lys Lys Glu Gly Trp Arg Pro Arg Arg Thr Ile Leu Phe Ala Ser
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Gln Arg Leu Gly Ile Ala Ser Gly Arg Ala Arg Tyr Thr Lys Asn
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Lys Tyr His Leu Thr Val Ala Gln Val Arg Gly Gly Met Val Phe
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695 700 705
Pro Gly Ile Tyr Asp Ala Leu Phe Asp Ile Glu Ser Lys Val Asp
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<211> 28
<212> DNA
<213> Artificial sequence

<220>
<221> primer_bind
<223> sense primer designed for only amplifying the first intron of the PSMA-like gene on chromosome 11q

<400> 5
gccttcattt tcagaacatc tcatgcat 28

<210> 6
<211> 25
<212> DNA
<213> Artificial sequence

<220>
<221> primer_bind
<223> antisense primer designed for only amplifying the first intron of the PSMA-like gene on chromosome 11q

<400> 6
gtccatataa actttcaaga atgtg 25

<210> 7
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<221> primer_bind
<223> sense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 2)

<400> 7
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<210> 8
<211> 20
<212> DNA
<213> Artificial sequence

<220>
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<223> antisense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 2)

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<210> 9
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<221> primer_bind
<223> sense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 3)

<400> 9
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<210> 10
<211> 22
<212> DNA
<213> Artificial sequence

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<220>
<221> primer_bind
<223> antisense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 3)

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<210> 11
<211> 22
<212> DNA
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<223> sense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 4)

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<210> 12
<211> 24
<212> DNA
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<220>
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<210> 13
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<212> DNA
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<223> sense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exons 5-6)

<400> 13
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<210> 14
<211> 22
<212> DNA
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<220>
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<223> antisense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exons 5-6)

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<210> 15
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<212> DNA
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<220>
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<223> sense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 7)

<400> 15
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<210> 16
<211> 22
<212> DNA
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<220>
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B1

<210> 17
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<212> DNA
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<223> sense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exons 8-9)

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<210> 18
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<221> primer_bind
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<210> 19

<211> 22
<212> DNA
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<220>
<221> primer_bind
<223> sense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 10)

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<210> 20
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<212> DNA
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<220>
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<223> antisense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 10)

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<210> 21
<211> 22
<212> DNA
<213> Artificial sequence

<220>
<221> primer_bind
<223> sense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 11)

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<210> 22
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<212> DNA
<213> Artificial sequence

<220>
<221> primer_bind
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<400> 22
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<210> 23
<211> 22
<212> DNA
<213> Artificial sequence

<220>
<221> primer_bind
<223> sense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 12)

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<210> 24
<211> 22
<212> DNA
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<220>
<221> primer_bind
<223> antisense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 12)

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<210> 25
<211> 22
<212> DNA
<213> Artificial sequence

<220>
<221> primer_bind
<223> sense oligonucleotide primer based upon intronic sequences of the PSMA genomic

clone used to amplify the corresponding regions of the PSMA-like gene (exon 13)

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<210> 26
<211> 22
<212> DNA
<213> Artificial sequence

<220>
<221> primer_bind
<223> antisense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 13)

B1

<400> 26
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<210> 27
<211> 22
<212> DNA
<213> Artificial sequence

<220>
<221> primer_bind
<223> sense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 14)

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<210> 28
<211> 22
<212> DNA
<213> Artificial sequence

<220>
<221> primer_bind
<223> antisense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 14)

<400> 28
caatcccaca ctgaattcag tg 22

<210> 29
<211> 22
<212> DNA
<213> Artificial sequence

<220>
<221> primer_bind
<223> sense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 15)

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B1

<210> 30
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<221> primer_bind
<223> antisense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 15)

<400> 30
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<210> 31
<211> 22
<212> DNA
<213> Artificial sequence

<220>
<221> primer_bind
<223> sense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exons 16-17)

<400> 31
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<210> 32
<211> 22

<212> DNA
<213> Artificial sequence

<220>
<221> primer_bind
<223> antisense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exons 16-17)

<400> 32
agttcagcaa cagtcatgtt ag 22

<210> 33
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<213> Artificial sequence

B1

<220>
<221> primer_bind
<223> sense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 18)

<400> 33
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<210> 34
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<221> primer_bind
<223> antisense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 18)

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gtgatattac agaaaggagt c 21

<210> 35
<211> 22
<212> DNA
<213> Artificial sequence

<220>

<221> primer_bind
<223> sense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 19)

<400> 35
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<210> 36
<211> 22
<212> DNA
<213> Artificial sequence

<220>
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<223> antisense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 19)

<400> 36
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<210> 37
<211> 24
<212> DNA
<213> Artificial sequence

<220>
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<223> sense primer (exon 10) used for performing PCR on cDNAs from various tissues

<400> 37
acagatatgt cattctggga ggtc 24

<210> 38
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<221> primer_bind
<223> antisense primer (exon 16) used for performing PCR on cDNAs from various tissues

<400> 38
actgtgatac agtggatagc cgct 24